

**Amendments to the Claims**

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claim 1 (currently amended): A method of extracting from an input image a graphical bar code-containing graphically encoded information, comprising:  
computing an angular orientation of the detected graphical bar code candidate; and  
trimming non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding, wherein the non-graphical bar code regions are trimmed based upon intensity histogram profiles obtained by summing intensity values along orthogonal axes corresponding to the computed angular orientation of the detected graphical bar code candidate.

Claim 2 (original): The method of claim 1, further comprising cropping the input image before trimming based upon estimated position coordinates for a detected graphical bar code candidate to produce an inclusive image region encompassing the detected graphical bar code.

Claims 3 and 4 (canceled)

Claim 5 (currently amended): The method of claim 1 [[4]], wherein the non-graphical bar code regions are trimmed based upon application of a threshold to the intensity histogram profiles.

Claim 6 (currently amended): The method of claim 1 [[4]], wherein the non-graphical bar code regions are trimmed based upon a comparison of expected graphical bar code dimensions with the intensity histogram profiles.

Claim 7 (currently amended): The method of claim 1 [[3]], further comprising de-skewing the detected graphical bar code candidate before the non-graphical bar code regions are trimmed.

Claim 8 (currently amended): A method of extracting from an input image a graphical bar code containing graphically encoded information, comprising:

~~The method of claim 1, further comprising~~ rotating the input image and processing the rotated input image to detect a graphical bar code candidate in response to a failure to detect a graphical bar code candidate in the input image before rotation; and

trimming non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 9 (currently amended): A method of extracting from an input image a graphical bar code containing graphically encoded information, comprising:

~~The method of claim 1, further comprising~~ detecting a graphical bar code candidate based upon a second training sample in response to a failure to detect a graphical bar code candidate in the input image based upon a first training sample; and

trimming non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 10 (original): The method of claim 9, wherein the second training sample is a rotated version of the first training sample.

Claim 11 (original): The method of claim 1, further comprising extracting a second graphical bar code candidate detected in the input image in response to a determination that a first extracted graphical bar code candidate does not correspond to the graphical bar code.

Claim 12 (currently amended): A method of extracting from an input image a graphical bar code containing graphically encoded information, comprising:

trimming non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding; and

~~The method of claim 1, further comprising~~ resolution scaling the trimmed graphical bar code candidate.

Claim 13 (currently amended): A system for extracting from an input image a graphical bar code containing graphically encoded information, comprising a graphical bar code extractor configured to:

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding, wherein the non-graphical bar code regions are trimmed based upon intensity histogram profiles obtained by summing intensity values along orthogonal axes corresponding to a computed angular orientation of the detected graphical bar code candidate.

Claim 14 (original): The system of claim 13, wherein the graphical bar code extractor is configured to crop the input image before trimming based upon estimated position coordinates for a detected graphical bar code candidate to produce an inclusive image region encompassing the detected graphical bar code.

Claim 15 (canceled)

Claim 16 (original): The system of claim 13, wherein the graphical bar code extractor is configured to de-skew the detected graphical bar code candidate before the non-graphical bar code regions are trimmed.

Claim 17 (currently amended): A system for extracting from an input image a graphical bar code containing graphically encoded information, comprising a graphical bar code extractor configured to:

~~The system of claim 13, wherein the graphical bar code extractor is configured to~~ rotate the input image and process the rotated input image to detect a graphical bar code

candidate in response to a failure to detect a graphical bar code candidate in the input image before rotation; and

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 18 (currently amended): A system for extracting from an input image a graphical bar code containing graphically encoded information, comprising a graphical bar code extractor configured to:

~~The system of claim 13, wherein the graphical bar code extractor is configured to~~ detect a graphical bar code candidate based upon a second training sample in response to a failure to detect a graphical bar code candidate in the input image based upon a first training sample; and

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 19 (original): The system of claim 13, wherein the graphical bar code extractor is configured to extract a second graphical bar code candidate detected in the input image in response to a determination that a first extracted graphical bar code candidate does not correspond to the graphical bar code.

Claim 20 (currently amended): A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:

compute an angular orientation of the detected graphical bar code candidate; and  
trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding, wherein the non-graphical bar code regions are trimmed based upon intensity histogram profiles obtained by summing intensity values along orthogonal axes corresponding to the computed angular orientation of the detected graphical bar code candidate.

Claim 21 (previously presented): The method of claim 1, further comprising decoding the graphical bar code candidate.

Claim 22 (previously presented): The system of claim 13, further comprising a decoder configured to decode the graphical bar code candidate.

Claim 23 (previously presented): The computer program of claim 20, further comprising computer-readable instructions for causing the computer to crop the input image before trimming based upon estimated position coordinates for a detected graphical bar code candidate to produce an inclusive image region encompassing the detected graphical bar code.

Claims 24 and 25 (canceled)

Claim 26 (currently amended): The computer program of claim 20 [[25]], wherein the non-graphical bar code regions are trimmed based upon application of a threshold to the intensity histogram profiles.

Claim 27 (currently amended): The computer program of claim 20 [[25]], wherein the non-graphical bar code regions are trimmed based upon a comparison of expected graphical bar code dimensions with the intensity histogram profiles.

Claim 28 (currently amended): The computer program of claim 20 [[24]], further comprising computer-readable instructions for causing the computer to de-skew the detected graphical bar code candidate before the non-graphical bar code regions are trimmed.

Claim 29 (currently amended): A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:  
The computer program of claim 20, further comprising computer readable instructions for causing the computer to rotate the input image and process preprocessing the rotated input image to detect a graphical bar code candidate in response to a failure to detect a graphical bar code candidate in the input image before rotation; and

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 30 (currently amended): A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:

~~The computer program of claim 20, further comprising computer-readable instructions for causing the computer to~~ detect a graphical bar code candidate based upon a second training sample in response to a failure to detect a graphical bar code candidate in the input image based upon a first training sample; and

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding.

Claim 31 (previously presented): The computer program of claim 30, wherein the second training sample is a rotated version of the first training sample.

Claim 32 (previously presented): The computer program of claim 20, further comprising computer-readable instructions for causing the computer to extract a second graphical bar code candidate detected in the input image in response to a determination that a first extracted graphical bar code candidate does not correspond to the graphical bar code.

Claim 33 (previously presented): A computer program residing on a computer-readable medium and comprising computer-readable instructions for causing a computer to:

trim non-graphical bar code regions from the input image based upon estimated position coordinates for a detected graphical bar code candidate to produce a trimmed graphical bar code candidate for decoding; and

~~The computer program of claim 20, further comprising computer-readable instructions for causing the computer to~~ resolution-scale the trimmed graphical bar code candidate.

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Claim 34 (previously presented): The computer program of claim 20, further comprising computer-readable instructions for causing the computer to decode the graphical bar code candidate.